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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/889,935	12/05/2001	Holger Klapproth	41993	4721

7590 05/24/2004

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EXAMINER

FORMAN, BETTY J

ART UNIT PAPER NUMBER

1634

DATE MAILED: 05/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/889,935		KLAPPROTH ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	BJ Forman		1634	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 March 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 12-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 and 15-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-14 and 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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**FINAL ACTION**

***Status of the Claims***

1. This action is in response to papers filed 15 March 2004 in which the specification was amended, claims 12 and 13 were amended, claim 11 was canceled and claim 24 was added.

All of the amendments have been thoroughly reviewed and entered.

The previous objections and rejections in the Office Action dated 15 September 2003, not reiterated below, are withdrawn in view of the amendments. Applicant's arguments have been thoroughly reviewed and are discussed below as they apply to the new grounds for rejection. New grounds for rejection necessitated by amendment are discussed.

Claims 1-10 and 15-23 are withdrawn.

Claims 12-14 and 24 are under prosecution.

***Priority***

2. Applicant's claim for foreign priority is acknowledged. The foreign application filed 01/25/1999 provides adequate support under 35 U.S.C. 112 for Claims 12-14 and 24 of this application.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 24 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Sundberg et al (U.S. Patent No. 5,919,523, issued 6 July 1999).

Regarding Claim 24, Sundberg et al disclose a method for producing a polyfunctional copolymer comprising assembly of copolymer chains (oligonucleotides) attached to the surface wherein each chain comprises multiple units having one or more functional groups allowing interaction (hybridization) with a sample the method comprising immobilizing a plurality of polymerization initiators on the surface wherein the initiators comprise functional groups for substrate linkage and polymerization initiation (Column 2, 20-37 and Fig. 8-11) and initiating polymerization reactions in the presence of monomers comprising functional groups (nucleotides) and comonomers (additional monomers) (Column 18, line 28-Column 19, line 59).

Regarding Claim 12, Sundberg et al disclose the method wherein the initiator comprises a thiol group, chlorosilane or alkoxy silane (Column 11, lines 45-Column 12, line 9).

#### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject

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matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 24, 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coté et al (U.S. Patent No. 6,485,703, having priority to provisional application filed, 31 July 1998) in view of DiCosmo et al (U.S. Patent No. 6,132,765, filed 15 April 1997).

Regarding Claim 24, Coté et al disclose a process for production of a polyfunctional copolymer monolayer comprising an assembly of copolymer chains attached to a surface (i.e. hydrogel adherent to a substrate, Column 5, lines 56-62) wherein the copolymer chains comprising monomers with functional groups (Column 6, lines 41-Column 7, line 59) the method comprising immobilizing a plurality of polymerization initiators on the surface (i.e. adherence, Column 26, line 10) and initiating polymerization reaction in the presence of monomers and comonomers (Column 25, line 25-Column 26, line 67). Coté et al teaches the method wherein the initiators and subsequent monolayer are adherent to the surface (e.g. Column 5, lines 56-62) which clearly suggests functional group interaction between the surface and the monolayer. DiCosmo et al teach a similar monolayer wherein the monolayer is adhered to the surface via linker molecules comprising functional groups (Column 5, lines 3-16) whereby the monolayer is maintained on the surface of a medical device thereby reducing device-related infections as taught by DiCosmo (Column 3, line 62-Column 4, line 51).

It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the function group attachment of DiCosmo et al to the monolayer adherence of Coté et al based on their desire for adherence and for the added benefit of maintaining the monolayer on the surface of a medical device thereby reducing device-related infections as taught by DiCosmo (Column 3, line 62-Column 4, line 51).

Regarding Claim 12, Coté et al disclose the process wherein the initiator comprises a thiol group (Column 25, lines 60-62).

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Regarding Claim 13, Coté et al disclose the process wherein the initiator comprises a ketone group in conjugation with an aromatic system (i.e. 2-2-dimethoxy-2-phenyl-acetophenone) (Example 2, Column 40, line 51-66).

Regarding Claim 14, Coté et al disclose the process wherein the initiator comprises an aromatic ketone (i.e. 2-2-dimethoxy-2-phenyl-acetophenone) (Example 2, Column 40, line 51-66).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

#### **Conclusion**


8. No claim is allowed.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
BJ Forman, Ph.D.  
Primary Examiner  
Art Unit: 1634  
May 18, 2004